REMARKS/ARGUMENTS

The claim amendments presented above add four new claims, cancel two claims and amend three claims. Consequently, it is believed that additional PTO claim fees have been generated by this filing. Payment of the additional claim fees accompanies this Response. If it is determined, however, that additional fees are also due in this application, the Commissioner is hereby authorized to charge Deposit Account No. 18-1722 in the amount of such fees.

Claims 1-3, 6-8, 13, 14, 16, 20-22, 26 and 29 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,408,318 of Fang et al. (Fang). Regarding the stated rejections, Applicant offers the following remarks.

Regarding the rejection of claims 1-3 and 6-8, Applicant believes that these claims are allowable over the cited reference. For example, Fang does not disclose a resonator component. Fang also does not teach a resonator in combination with the other features outlined in the claims. Thus, claim 1 and the claims dependent thereon should be found to be allowable.

Regarding the rejection of claims 13, 14 and 16, Applicant believes that these claims are also allowable over the cited reference. For example, the Zero Insertion Filter, as shown in Figures 1A and 1B of Fang, is a four-stage cascaded comb filter (four differentiators with response zeros at 25.1 KHz, 34.6 KHz, 44.1 KHz, and 64.0 KHz). It is not an integrator and it is not an "integrator structure comprising at least one recursive integrator stage" as claimed in pending claim 13. With the Zeros Insertion Filter in the overall decimation filter, the number of Zeros is no longer equal to the number of Poles

present, namely 4 + 3 + 1 + 2 = 10 Zeros and 4 + 2 = 6 Poles are present. The Fang filter would clearly be unstable if the leading stages were integrators rather than combs, having then 10 Poles and being offset by only 6 Zeros.

In addition, regarding the rejection of claim 14, Figure 1B of Fang also does not show a second integrator structure. The filter of Figure 1B has only a single, four-integrator cascade structure which has as its input sample rate 1.28 MHz, the filter input sample rate.

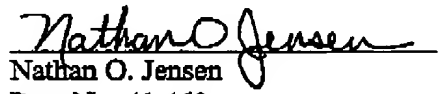
Further, regarding the rejection of claim 16, Fang includes a serial to parallel converter, but not as a data rate change component. Rather, Fang's serial to parallel converter is included therein as a means of implementing the comb delays and the comb subtractions needed to implement the four-stage comb cascade using a large adder. There is no pre-decimated integrator filter disclosed in Fang.

Regarding the objection to claims 13 and 20, recursive integrator stages are disclosed in the specification. For example, Figures 13, 14, and 20, and by extension Figures 7 and 9, show "recursive integrator stages" as individually shown by Figure 2. It is therefore requested that this objection to the claims be withdrawn.

New claims 31-34 are related to various of the objected claims that have been indicated to be allowable. It is therefore believed that the new claims are also allowable.

Applicant believes that the above remarks fully address the issues and rejections raised in the Office Action and establish that the pending claims are allowable over the stated rejections. Entry of the amendments and issuance of a Notice of Allowance is respectfully requested.

Respectfully Submitted,

By 
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